

We claim:

1. An automated system enabling at least one given caller, who may be one of a hearing caller and a hearing-impaired caller, to access functionality associated with at least one resource, the automated system comprising at least the
5 following:
at least one computer-based subsystem adapted to perform at least the following:
receive a call from the given caller;
issue at least one prompt in at least a first format, the prompt requesting at least a first response;
10 receive a response after issuing the prompt; and
route the call so as to provide the given caller access to the at least one resource depending on an analysis of the response.
2. The automated system of claim 1, wherein the at least one computer-based subsystem is adapted to receive the call from the given caller via a common
15 telephone number dialed by both hearing callers and hearing-impaired callers.
3. The automated system of claim 1, wherein the at least one computer-based subsystem is adapted to issue at least a further prompt in at least a further format, the at least further prompt requesting at least a further response, and to receive the response after issuing the further prompt.
- 20 4. The automated system of claim 3, wherein the first format is different than the further format.
5. The automated system of claim 1, wherein the at least one computer-based subsystem is adapted to detect a pre-defined, signal transmitted from a device that is configured to transmit the signal periodically.
- 25 6. The automated system of claim 1, wherein the first format is a speech-based format.
7. The automated system of claim 1, wherein the prompt requests the given caller to enter at least one DTMF tone in response to the prompt.

8. The automated system of claim 1, wherein the first format is a format suitable for hearing-impaired callers.
9. The automated system of claim 1, wherein the first format is a format suitable for hearing callers.
- 5 10. The automated system of claim 1, wherein the first format is a Baudot-compliant format.
11. The automated system of claim 1, wherein the first format is selected so as to cause a device associated with the hearing-impaired caller to generate at least one signal in the first format in response to the prompt.
- 10 12. The automated system of claim 3, wherein, for all given callers, the computer-based subsystem is adapted to issue the prompt in the first format before issuing the further prompt in the further format.
13. The automated system of claim 3, wherein, for at least some given callers, the computer-based subsystem is adapted to issue the prompt in the first format
15 before issuing the further prompt in the further format.
14. The automated system of claim 3, wherein the computer-based subsystem is adapted to issue the prompt at approximately the same time as the further prompt.
15. The automated system of claim 1, wherein the computer-based subsystem is adapted to issue the prompt, and after a pre-defined period of time expires with no
20 response to the prompt, to issue the further prompt.
16. The automated system of claim 8, wherein the computer-based subsystem is adapted to issue the prompt in the format suitable for hearing-impaired callers before a device associated with a given hearing-impaired caller transmits any data to the automated system.
- 25 17. The automated system of claim 1, wherein the computer-based subsystem is adapted to issue at least one prompt for the given caller to respond to the at least one prompt by generating at least one dual tone multi-frequency (DTMF) signal.

18. The automated system of claim 1, wherein the computer-based subsystem is adapted to issue at least one prompt for a device associated with the given caller to respond to the computer-based subsystem.
- 5 19. The automated system of claim 1, wherein the computer-based subsystem is adapted to issue at least one prompt for a TDD/TTY device associated with the given caller to respond to the computer-based subsystem.
20. The automated system of claim 1, wherein the computer-based subsystem is adapted to issue at least one prompt requesting that the given caller generate at least one DTMF tone by pressing at least one key on a keypad.
- 10 21. The automated system of claim 1, wherein the computer-based subsystem is adapted to issue at least one prompt requesting that the given caller provide at least one voice response to the prompt.
22. The automated system of claim 1, wherein the computer-based subsystem is adapted to re-issue the prompt should the given caller respond to the prompt
15 incorrectly.
23. The automated system of claim 1, wherein the computer-based subsystem is adapted to route the call to a speech-recognition platform should the given caller respond to the prompt incorrectly.
24. The automated system of claim 1, wherein the computer-based subsystem is
20 adapted to route the call to a DTMF platform should the given caller respond to the prompt incorrectly.
25. The automated system of claim 1, wherein the computer-based subsystem is adapted to identify at least one signal having a frequency of approximately 1,400 Hertz.
- 25 26. The automated system of claim 1, wherein the computer-based subsystem is adapted to identify at least one signal having a frequency of approximately 1,800 Hertz.

27. The automated system of claim 1, wherein the computer-based subsystem is adapted to identify a plurality of signals, at least one of which plurality of signals has a frequency of approximately 1,800 Hertz.
- 5 28. The automated system of claim 1, wherein the computer-based subsystem is adapted to identify a plurality of signals, at least one of which plurality of signals has a frequency of approximately 1,400 Hertz.
- 10 29. The automated system of claim 1, wherein the computer-based subsystem is adapted to identify a plurality of signals, at least one of which signals has a frequency of approximately 1,400 Hertz and at least one of which signals has a frequency of approximately 1,800 Hertz.
30. The automated system of claim 3, wherein the computer-based subsystem is adapted to identify at least one signal that substantially matches at least one characteristic frequency that corresponds to a response requested in at least one of the prompt and the further prompt.
- 15 31. The automated system of claim 3, wherein the computer-based subsystem is adapted to identify at least one signal that substantially matches at least one frequency that is characteristic of a DTMF tone and that corresponds to a response requested in at least one of the prompt and the further prompt.
- 20 32. The automated system of claim 3, wherein the computer-based subsystem is adapted to identify at least one signal that substantially matches at least one DTMF frequency characteristic and that corresponds to a response other than a response requested in at least one of the prompt and the further prompt.
33. The automated system of claim 1, wherein the computer-based subsystem is adapted to recognize speech input from the at least one given caller.
- 25 34. The automated system of claim 1, wherein the computer-based subsystem is adapted to route the call to a DTMF platform based on a DTMF response from the given caller.

35. The automated system of claim 1, wherein the computer-based subsystem is adapted to route the call to a TDD/TTY platform based on a response received from a device associated with the given caller.
36. The automated system of claim 1, wherein the computer-based subsystem is adapted to route the call to a TDD/TTY platform based on a Baudot-compliant response received from a device associated with the given caller.
37. The automated system of claim 1, wherein the computer-based subsystem is adapted to route the call to a speech recognition platform based on a response from the given caller.
38. The automated system of claim 1, wherein the computer-based subsystem is a voice response unit.
39. The automated system of claim 1, wherein the computer-based subsystem is adapted to perform a plurality of evaluations of the response in parallel.
40. The automated system of claim 1, further comprising a speech recognition platform, and wherein the computer-based subsystem is adapted to route the call for processing by the speech recognition platform based on a response from the given caller.
41. The automated system of claim 40, wherein the speech recognition platform is adapted to process the call so as to provide the given caller access to the resource in the form of a data store.
42. The automated system of claim 40, wherein the speech recognition platform is adapted to process the call so as to enable the given caller to submit data for entry into a do-not-call list.
43. The automated system of claim 40, wherein the speech recognition platform is adapted to process the call so as to enable the given caller to submit a telephone number for entry into a do-not-call list.
44. The automated system of claim 1, further comprising a TDD/TTY platform, and wherein the computer-based subsystem is adapted to route the call for processing

by the TDD/TTY platform based on a response received from a device associated with the given caller.

- 5 45. The automated system of claim 44, wherein the TDD/TTY platform is adapted to process the call so as to provide the given caller access to the resource in the form of a data store.
46. The automated system of claim 44, wherein the TDD/TTY platform is adapted to process the call so as to enable the given caller to submit data for entry into a do-not-call list.
- 10 47. The automated system of claim 44, wherein the TDD/TTY platform is adapted to process the call so as to enable the given caller to submit a telephone number for entry into a do-not-call list.
48. The automated system of claim 44, wherein the TDD/TTY platform is adapted to process the call using a grammar that is specially defined for use with the resource.
- 15 49. The automated system of claim 1, further comprising a DTMF platform, and wherein the computer-based subsystem is adapted to route the call for processing by the DTMF platform based on a DTMF response from the given caller.
50. The automated system of claim 49, wherein the DTMF platform is adapted to process the call so as to provide the given caller access to the resource in the form of a data store.
- 20 51. The automated system of claim 49, wherein the DTMF platform is adapted to process the call so as to enable the given caller to submit data for entry into a do-not-call list.
52. The automated system of claim 49, wherein the DTMF platform is adapted to process the call so as to enable the given caller to submit a telephone number for entry into a do-not-call list.
- 25 53. A method for enabling at least one given caller, who may be one of a hearing caller and a hearing-impaired caller, to access functionality associated with at

least one resource using a telephone number available to both the hearing caller and the hearing-impaired caller, the method comprising at least the following:

receiving a call from the given caller placed to the telephone number;

issuing a prompt in a first format, the first prompt requesting a first

5 response associated with the hearing caller;

issuing at least a further prompt in at least a further format, the at least

further prompt requesting at least a further response, the further

prompt requesting a further response associated with the hearing-impaired caller;

10 receiving a response from one of the given caller and a device associated with the given caller after issuing the prompt and the at least further prompt; and

routing the call so as to provide the given caller access to the at least one resource depending on an analysis of the response.

15 54. Apparatus for enabling at least one given caller, who may be one of a hearing caller and a hearing-impaired caller, to access functionality associated with at least one resource, the apparatus comprising at least the following:

means for receiving a call from the given caller;

20 means for issuing a prompt in a first format, the first prompt requesting a first response;

means for receiving a response after issuing the prompt; and

means for routing the call so as to provide the given caller access to the at least one resource depending on an analysis of the response.

25 55. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for enabling at least one given caller, who may be one of a hearing caller and a hearing-impaired caller, to access functionality associated with at least one resource, the method comprising at least the following:

- receiving a call from the given caller;
- issuing a prompt in a first format, the first prompt requesting a first response;
- receiving a response after issuing the prompt; and
- 5 routing the call so as to provide the given caller access to the at least one resource depending on an analysis of the response.